



Cisco 1811 and 1812 Integrated Services Router Cabling and Installation

INCLUDING LICENSE AND WARRANTY

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Note: For localized versions of these instructions, please see the following URL:
http://www.cisco.com/univercd/cc/td/doc/product/access/acs_mod/1800fix/qsgs/index.htm



1 Cisco One-Year Limited Hardware Warranty Terms

There are special terms applicable to your hardware warranty and various services that you can use during the warranty period. Your formal Warranty Statement, including the warranty applicable to Cisco software, is included on the CD that accompanies your Cisco product. Follow these steps to access and download the *Cisco Information Packet* and your warranty document from the CD or from Cisco.com.

1. Launch your browser, and go to this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpk/cetrans.htm

The Warranties and License Agreements page appears.

2. To read the *Cisco Information Packet*, follow these steps:
 - a. Click the **Information Packet Number** field, and make sure that the part number 78-5235-02F0 is highlighted.
 - b. Select the language in which you would like to read the document.
 - c. Click **Go**.

The Cisco Limited Warranty and Software License page from the Information Packet appears.

- d. Read the document online, or click the **PDF** icon to download and print the document in Adobe Portable Document Format (PDF).



Note

You must have Adobe Acrobat Reader to view and print PDF files. You can download the reader from Adobe's website: <http://www.adobe.com>

3. To read translated and localized warranty information about your product, follow these steps:

- a. Enter this part number in the Warranty Document Number field:

78-10747-01C0

- b. Select the language in which you would like to view the document.
- c. Click **Go**.

The Cisco warranty page appears.

- d. Read the document online, or click the **PDF** icon to download and print the document in Adobe Portable Document Format (PDF).

You can also contact the Cisco service and support website for assistance:

<http://www.cisco.com/en/US/support/>.

Duration of Hardware Warranty

One (1) Year

Replacement, Repair, or Refund Policy for Hardware

Cisco or its service center will use commercially reasonable efforts to ship a replacement part within ten (10) working days after receipt of a Return Materials Authorization (RMA) request. Actual delivery times can vary, depending on the customer location.

Cisco reserves the right to refund the purchase price as its exclusive warranty remedy.

To Receive a Return Materials Authorization (RMA) Number

Contact the company from whom you purchased the product. If you purchased the product directly from Cisco, contact your Cisco Sales and Service Representative.

Complete the information below, and keep it for reference.

Company product purchased from	
Company telephone number	
Product model number	
Product serial number	
Maintenance contract number	

2 Overview

This document describes the steps for installing the Cisco 1811 and the Cisco 1812 integrated services routers. The Cisco 1811 and Cisco 1812 routers are fixed-configuration routers. They each include an integrated 8-port 10/100-Mbps Ethernet switch, two onboard Fast Ethernet WAN ports, two dual USB 2.0 ports, and optional 802.11a/b/g wireless LAN support. The switch ports and the onboard 10/100-Mbps Ethernet ports support 802.1Q virtual LAN (VLAN) encapsulation and enable you to configure demilitarized zones (DMZs), using VLANs and Cisco IOS firewall features. The switch ports are also optionally upgradable to include inline power support for IP phones.

The Cisco 1811 and Cisco 1812 integrated services routers provide secure Internet connectivity and dial backup if your primary connection fails. The Cisco 1811 router provides dial backup through a V.92 analog modem port. The Cisco 1812 router provides dial backup through an ISDN S/T port.

Additional documentation can be found on Cisco.com.

Product Serial Number Location

The serial number label for the Cisco 1811 and Cisco 1812 routers is located on the back of the chassis, above and to the right of the power switch. You need this serial number when calling Cisco for support. To see specifically where the serial label is on your router, go to the following link:

<http://tools.cisco.com/Support/CPI/index.do>

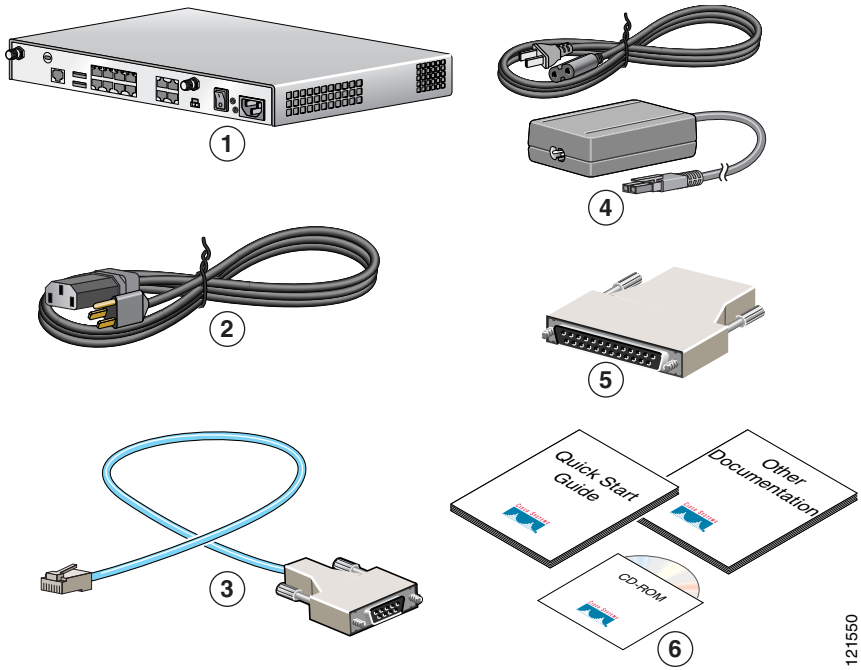
3 Unpacking the Box

When you unpack the box containing your Cisco 1811 or Cisco 1812 router, you should find the items shown in Figure 1.



Note The Cisco 1811 and Cisco 1812 routers have a wireless upgradable option. If this option is chosen, an antenna kit should have been shipped with your router in addition to the items listed in Figure 1.

Figure 1 Items Included with the Cisco 1811 and Cisco 1812 Integrated Services Router



121550

1	Cisco 1811 or Cisco 1812 router	4	PoE power supply and cable (optional)
2	Power cable	5	DB-9 to DB-25 adapter
3	Console cable (light blue, RJ-45 to DB-9)	6	Product documentation

The shipment should include the following items:

- One Cisco 1811 router or one Cisco 1812 router
- One blue RJ-45-to-DB-9 console cable
- One DB-9-to-DB-25 adapter
- One black power supply cord
- One Power over Ethernet (PoE) power supply, if the router was purchased with the PoE option
- Product documentation
- One CD-ROM containing Cisco Router and Security Device Manager (SDM)
- One antenna kit (optional)

Items You Need to Provide

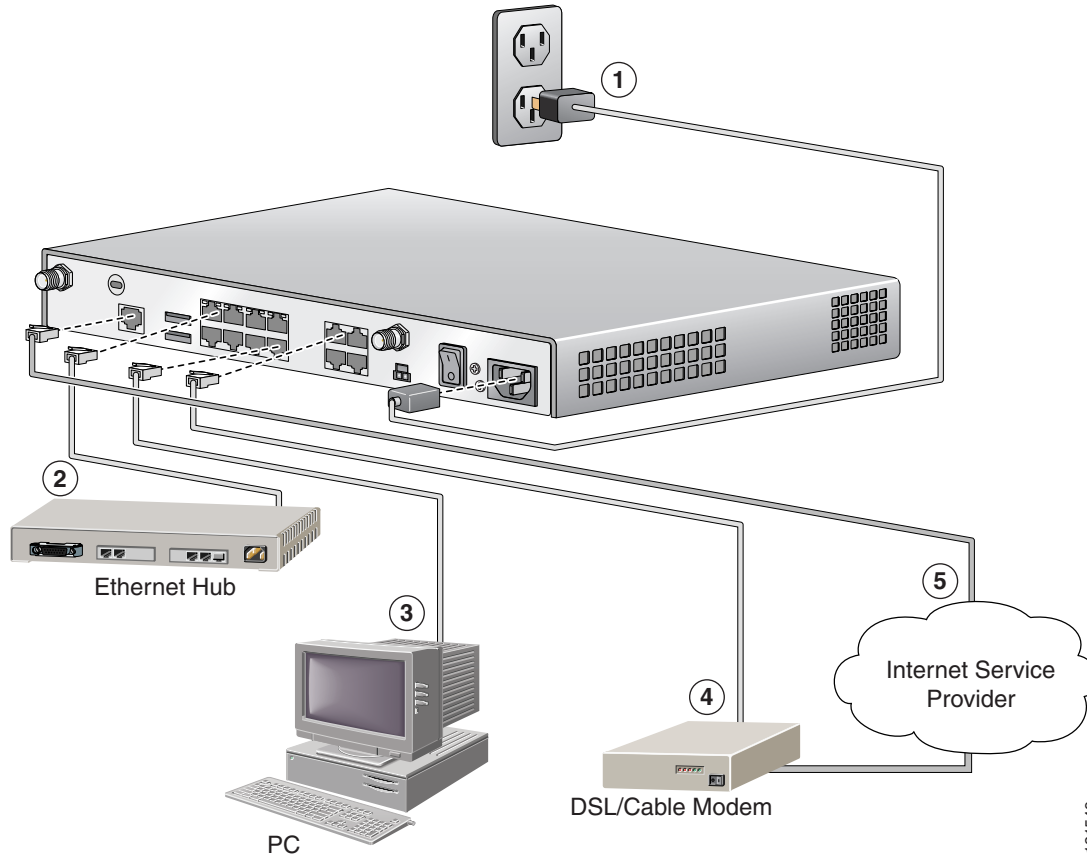
Depending on your network environment, you may need to provide some of the following items so that you can install the router:

- Straight-through Ethernet cables (RJ-45-to-RJ-45) to connect the router to a broadband (xDSL or cable) modem and to a hub or switch
- Ethernet hub or switch to connect the router to the local network, or an xDSL or cable modem to connect the router to the service provider
- Server or other computer with a network interface card (NIC) or other networked device (such as a hub or a switch) to connect to the integrated 8-port 10/100-Mbps Ethernet switch

4 Connecting the Router

Figure 2 shows a typical installation of a Cisco 1811 or Cisco 1812 router.

Figure 2 Typical Installation of a Cisco 1811 or Cisco 1812 Router



Follow these steps to connect the router to the power supply, your local network, and your service provider network:

Step 1 Connect power to the router as shown in Figure 2:

- a. Connect the separate power cord to the power socket on the back panel of the router.
- b. Connect the other end of the separate power cord to a power outlet.



Note

If you have a router with the PoE option, you must connect the PoE power supply to the PoE socket on the back of the router, connect the female end of the PoE power cable to the PoE power supply, and connect the male end of the PoE power cable to a power outlet.

- c. Turn on the router by pressing the power switch to the on (|) position.
- d. Confirm that the router has power by checking that the SYS OK LED on the front panel is on.

Step 2 To connect the router to your network, connect one end of an Ethernet cable (RJ-45) to an Ethernet switch port (FE 2–FE 9), and connect the other end of the cable to a port on a hub or switch, as shown in Figure 2.



Note

The example in Figure 2 shows connectivity to a hub. The router Ethernet switch ports can be connected to another networked device, such as a switch or computer with a network interface card (NIC). If you are connecting a computer to the switch port on the router, it will take about 30 seconds for connectivity to be established.

Step 3 To use Cisco Router and Security Device Manager (SDM) to configure your router, you must connect a PC to the first Ethernet switch port. Connect one end of an Ethernet cable to one of the Ethernet switch ports (*FE 2–FE 9*), and connect the other end to the Ethernet port on your PC.



Caution Always connect the Ethernet cable to an Ethernet port on the router. Accidentally connecting the cable to the wrong port can damage your router.

Step 4 To connect the router to your service provider network, connect one end of an Ethernet cable to a 10/100 Fast Ethernet port (these ports are labeled FE 0 and FE 1); connect the other end of the cable to a network port on your service provider's broadband (xDSL or cable) modem equipment, as shown in Figure 2.



Caution Always connect the Ethernet cable to an Ethernet port on the router. Accidentally connecting the cable to the wrong port can damage your router.

Step 5 (Optional) The Cisco 1811 router supports a 230-kbps dialup connection to your service provider network through its V.92 modem port. The Cisco 1812 router supports a 144-kbps dialup connection to your service provider network through its ISDN S/T port. These connections can serve as a backup to your service provider if your primary connection goes down. To make a backup connection to your service provider network, connect one end of a straight-through RJ-11 cable to the V.92 modem port (for the Cisco 1811) or a straight-through RJ45 cable to the ISDN S/T port (for the Cisco 1812) on the router, as shown in Figure 2, and connect the other end of the cable to your telephone wall jack.



Note To configure your router for a backup dialup connection, you must use the Cisco IOS command-line interface (CLI). For more information, see the *Cisco 1800 Series Integrated Services Routers (Fixed) Software Configuration Guide*.

5 Connecting Antennas to the Router RP-TNC Connectors

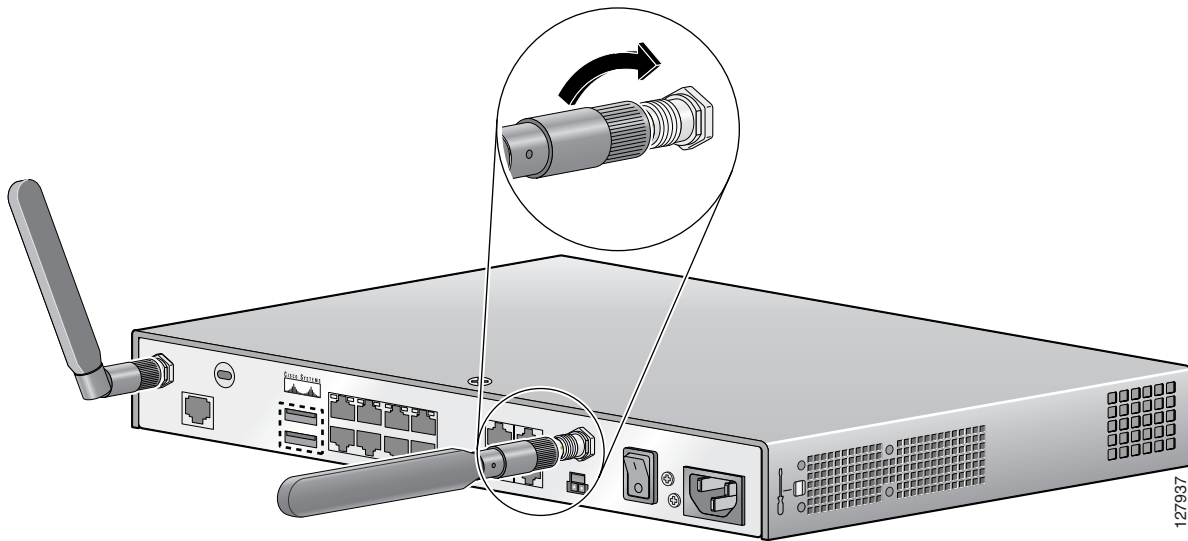
If your router has the wireless LAN option, connect the antennas by screwing the antenna connectors in a clockwise direction onto the reverse-polarity threaded Neill-Concelman (RP-TNC) connectors on the back panel of the router. Figure 3 shows an example of how to connect the swivel-mount dipole antennas to the router.



Note The location and position of your router antennas are crucial to effective wireless connectivity. For more information about the antennas compatible with the Cisco 1801, Cisco 1802, and Cisco 1803 routers, see the online documents located at the following URL:

http://www.cisco.com/univercd/cc/td/doc/product/access/acs_mod/1800fix/antennas/index.htm

Figure 3 Connecting Antennas to the Router



For information about configuring the wireless LAN functionality of your router, see the *Cisco Access Router Wireless Configuration Guide* at the following URL:

http://www.cisco.com/univercd/cc/td/doc/product/access/lacs_mod/1800fix/lawg/index.htm

6 Configuring the Router Using Cisco Router and Security Device Manager

Cisco Router and Security Device Manager (SDM) is a web-based configuration tool that allows you to configure LAN and WAN interfaces, routing, Network Address Translation (NAT), firewalls, VPNs, and other features on your router. If SDM is installed on your router, configure the router by following the instructions in the *Cisco Router and Security Device Manager (SDM) Quick Start Guide*. If this document was not shipped with your router, you can obtain the SDM software and instructions for installing it on your router from the following location:

<http://www.cisco.com/cgi-bin/tablebuild.pl/sdm>

To obtain the SDM release notes and other SDM documentation, go to the following URL and click the **Technical Documentation** link.

<http://www.cisco.com/go/sdm>

7 Connecting a PC to the Router Console Port

This step is optional; it is required only if you want to use the Cisco IOS CLI instead of SDM to configure or troubleshoot the router. To use Cisco IOS, you must connect the router to a terminal or to a PC with terminal emulation software. Terminal emulation software should be configured with the following settings:

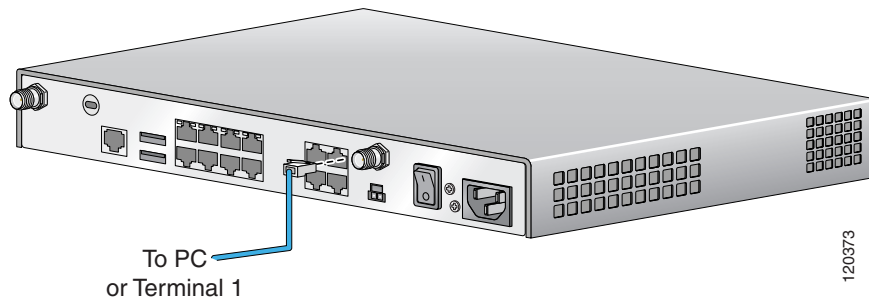
- 9600 baud
- 8 data bits
- No parity bits
- 1 stop bit

The *Cisco 1800 Series Integrated Services Routers (Fixed) Software Configuration Guide* describes how to configure the router by using Cisco IOS software.

Follow these steps to connect the router to a terminal or PC:

Step 1 Connect the RJ-45 end of the console cable to the CONSOLE port on the back panel of the router, as shown in Figure 4.

Figure 4 Connecting the Console Cable to the Router



Step 2 Connect the DB-9 end of the console cable to the console port (also called the *serial port*) on your PC. If this adapter does not fit your PC console port, you must provide an adapter that fits.

8 Verifying Your Installation

You can verify that you have correctly installed your router by checking the LEDs as described in Table 1.

Table 1 LEDs That Verify Installation

LED	Meaning
SYS OK	Steady green—Router has successfully booted up and the software is functional. Blinking green—Router is booting or in ROM monitor mode.
POE ¹	Off—Inline power supply not installed. Steady green—Inline power supply OK. Amber—Power denied.
FE 0–9	Steady green—Ethernet link is established. Blinking green—Activity on the Ethernet link. Off—No link.
CD ²	Steady green—Modem connection established (carrier detect). Off—No connection established.
SPD ²	Steady green—Connection at high speed (V.90). Off—Connection at low speed (V.32/V.32b/V.34).
BUSY ²	Blinking green—Activity over modem line. Off—No activity.
LINK ³	Steady green—ISDN S/T connection established. Off—No ISDN S/T connection established.
B1 ³	Blinking green—Activity on first B channel. Off—No activity on first B channel.
B2 ³	Blinking green—Activity on second B channel. Off—No activity on second B channel.

Table 1 LEDs That Verify Installation (Continued)

LED	Meaning
PPP	Steady green—At least one PPP connection established. Off—No PPP link established.
VPN	Steady green—At least one VPN tunnel established. Off—No VPN tunnel established.
CF	Blinking green—CompactFlash memory being accessed. Do not remove CompactFlash memory. Off—CompactFlash memory is not being accessed. It is safe to remove CompactFlash memory.

1. Inline power is a field-upgradable option only. It is not installed by default.
2. This LED is on the Cisco 1811 router only.
3. This LED is on the Cisco 1812 router only.

9 Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

http://www.cisco.com/public/countries_languages.shtml

Documentation DVD

Cisco documentation and additional literature are available in a Documentation DVD package, which may have shipped with your product. The Documentation DVD is updated regularly and may be more current than printed documentation. The Documentation DVD package is available as a single unit.

Registered Cisco.com users (Cisco direct customers) can order a Cisco Documentation DVD (product number DOC-DOCDVD=) from the Ordering tool or Cisco Marketplace.

Cisco Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/>

Cisco Marketplace:

<http://www.cisco.com/go/marketplace/>

Ordering Documentation

You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:
<http://www.cisco.com/en/US/partner/ordering/>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 1 800 553-NETS (6387).

Documentation Feedback

You can send comments about technical documentation to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

10 Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

From this site, you can perform these tasks:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories and notices for Cisco products is available at this URL:

<http://www.cisco.com/go/psirt>

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from this URL:

http://www.cisco.com/en/US/products/products_psirt_rss_feed.html

Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you might have identified a vulnerability in a Cisco product, contact PSIRT:

- Emergencies—security-alert@cisco.com
- Nonemergencies—psirt@cisco.com

**Tip**

We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.x through 8.x.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one that has the most recent creation date in this public key server list:

<http://pgp.mit.edu:11371/pks/lookup?search=psirt%40cisco.com&op=index&exact=on>

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

11 Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, Cisco Technical Support provides 24-hour-a-day, award-winning technical assistance. The Cisco Technical Support Website on Cisco.com features extensive online support resources. In addition, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not hold a valid Cisco service contract, contact your reseller.

Cisco Technical Support Website

The Cisco Technical Support Website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, 365 days a year, at this URL:

<http://www.cisco.com/techsupport>

Access to all tools on the Cisco Technical Support Website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

**Note**

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support Website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco TAC engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco TAC engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

12 Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

<http://www.cisco.com/go/marketplace/>

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

<http://www.ciscopress.com>

- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:

<http://www.cisco.com/packet>

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

<http://www.cisco.com/goliqmagazine>

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

<http://www.cisco.com/ipj>

- World-class networking training is available from Cisco. You can view current offerings at this URL:

<http://www.cisco.com/en/US/learning/index.html>

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